WHAT IS CLAIMED IS:

1. A polishing pad substrate comprising a copolymer, wherein the copolymer has at least one hydrophilic repeat unit and at least one hydrophobic repeat unit.

2. The polishing pad substrate of claim 1, wherein the polishing pad has a surface energy of about 34 mN/m or less.

3. The polishing pad substrate of claim 1, wherein the hydrophilic repeat unit is selected from the group consisting of esters, ethers, acrylic acids, acrylamides, amides, imides, vinylalcohols, vinylacetates, acrylates, methacrylates, sulfones, urethanes, vinylchlorides, etheretherketones, carbonates, and oligomers and combinations thereof.

4. The polishing pad substrate of claim 1, wherein the hydrophilic repeat unit is urethane.

5. The polishing pad substrate of claim substrate 1, wherein the hydrophobic repeat unit is selected from the group consisting of fluorocarbons, tetrafluoroethylenes, vinylfluorides, siloxanes, dimethylsiloxanes, butadiene, ethylene, olefins, styrene, propylene, and oligomers and combinations thereof.

6. The polishing pad substrate of claim 1, wherein the hydrophobic repeat unit is fluorocarbon or siloxane.

7. The polishing pad substrate of claim 1, wherein the polishing pad substrate is a solid, non-porous polishing pad substrate.

8. The polishing pad substrate of claim 1, wherein the polishing pad substrate has a density of about 90% or more of the maximum theoretical density of the copolymer.

9. The polishing pad substrate of claim 1, wherein the polishing pad substrate is a porous polishing pad substrate.

10. The polishing pad substrate of claim 9, wherein the polishing pad substrate has a density of about 70% or less of the maximum theoretical density of the copolymer.

11. The polishing pad substrate of claim 9, wherein the polishing pad substrate has a void volume of about 75% or less.

12. The polishing pad substrate of claim 1, wherein the polishing pad substrate is a polishing layer.

13. The polishing pad substrate of claim 12, wherein the polishing layer further comprises grooves.

14. The polishing pad substrate of claim 1, wherein the polishing pad substrate is a subpad.

15. The polishing pad substrate of claim 1, wherein the polishing pad substrate further comprises an optically transmissive region.

16. The polishing pad substrate of claim 15, wherein the optically transmissive region has a light transmission of at least 10% at one or more wavelengths between from about 190 nm to about 3500 nm.

17. The polishing pad substrate of claim 15, wherein the optically transmissive region comprises the copolymer.

18. The polishing pad substrate of claim 1, wherein the polishing pad substrate further comprises abrasive particles.

19. The polishing pad substrate of claim 18, wherein the abrasive particles comprise metal oxide selected from the group consisting of alumina, silica, titania, ceria, zirconia, germania, magnesia, co-formed products thereof, and combinations thereof.

20. The method of polishing a workpiece comprising

(i) providing a workpiece to be polished,

(ii) contacting the workpiece with a polishing system comprising the polishing pad substrate of claim 1, and

(iii) abrading at least a portion of the surface of the workpiece with the polishing system to polish the workpiece.

21. The method of claim 20, wherein the workpiece comprises a surface layer comprising a material selected from the group consisting of monocrystalline silicon, polycrystalline silicon, amorphous silicon, tungsten silicide, titanium silicide, organic polymer, tungsten, copper, titanium, metal oxide, metal nitride, and combinations thereof.

22. The method of claim 20, wherein the polishing system is a chemical-mechanical polishing system further comprising a polishing composition.

23. The method of claim 20, wherein the method further comprises detecting *in situ* a polishing endpoint.

24. A polishing pad substrate comprising a polymer, wherein the polymer has at least one hydrophilic unit and at least one hydrophobic unit attached to the polymer chain.

25. The polishing pad substrate of claim 24, wherein the polymer is a thermoplastic polymer or a thermoset polymer.

26. The polishing pad substrate of claim 25, wherein the thermoplastic polymer or the thermoset polymer is selected from the group consisting of polyurethanes, polyolefins, polyvinylalcohols, polyvinylacetates, polycarbonates, polyacrylic acids, polyacrylamides, polyethylenes, polypropylenes, nylons, fluorocarbons, polyesters, polyethers, polyamides, polyimides, polytetrafluoroethylenes, polyetheretherketones, copolymers thereof, and mixtures thereof.

27. The polishing pad substrate of claim 26, wherein the thermoplastic polymer or the thermoset polymer is selected from the group consisting of polyurethanes and polyolefins.

28. The polishing pad substrate of claim 24, wherein the polishing pad has a surface energy of about 34 mN/m or less.

29. The polishing pad substrate of claim 24, wherein the hydrophilic unit is selected from the group consisting of esters, ethers, acrylic acids, acrylamides, amides, imides, vinylalcohols, vinylacetates, acrylates, methacrylates, sulfones, urethanes, vinylchlorides, etheretherketones, carbonates, and oligomers and combinations thereof.

30. The polishing pad substrate of claim 24, wherein the hydrophilic unit is urethane.

31. The polishing pad substrate of claim substrate 24, wherein the hydrophobic unit is selected from the group consisting of fluorocarbons, tetrafluoroethylenes, vinylfluorides, siloxanes, dimethylsiloxanes, butadiene, ethylene, olefins, styrene, propylene, and oligomers and combinations thereof.

32. The polishing pad substrate of claim 24, wherein the hydrophobic unit is fluorocarbon or siloxane.

33. The polishing pad substrate of claim 24, wherein the at least one hydrophilic unit and the at least one hydrophobic unit are attached to a terminal repeat unit of the polymer chain.

34. The polishing pad substrate of claim 24, wherein the polishing pad substrate is a solid, non-porous polishing pad substrate.

35. The polishing pad substrate of claim 24, wherein the polishing pad substrate has a density of about 90% or more of the maximum theoretical density of the copolymer.

36. The polishing pad substrate of claim 24, wherein the polishing pad substrate is a porous polishing pad substrate.

37. The polishing pad substrate of claim 36, wherein the polishing pad substrate has a density of about 70% or less of the maximum theoretical density of the polymer.

38. The polishing pad substrate of claim 36, wherein the polishing pad substrate has a void volume of about 75% or less.

39. The polishing pad substrate of claim 24, wherein the polishing pad substrate is a polishing layer.

40. The polishing pad substrate of claim 39, wherein the polishing layer further comprises grooves.

41. The polishing pad substrate of claim 24, wherein the polishing pad substrate is a subpad.

42. The polishing pad substrate of claim 24, wherein the polishing pad substrate further comprises an optically transmissive region.

43. The polishing pad substrate of claim 42, wherein the optically transmissive region has a light transmission of at least 10% at one or more wavelengths between from about 190 nm to about 3500 nm.

44. The polishing pad substrate of claim 42, wherein the optically transmissive region comprises the polymer having at least one hydrophilic unit and at least one hydrophobic unit attached to the polymer chain.

45. The polishing pad substrate of claim 24, wherein the polishing pad substrate further comprises abrasive particles.

46. The polishing pad substrate of claim 45, wherein the abrasive particles comprise metal oxide selected from the group consisting of alumina, silica, titania, ceria, zirconia, germania, magnesia, co-formed products thereof, and combinations thereof.

47. The method of polishing a substrate comprising

(i) providing a workpiece to be polished,

(ii) contacting the workpiece with a polishing system comprising the polishing pad substrate of claim 24, and

(iii) abrading at least a portion of the surface of the workpiece with the polishing system to polish the workpiece.

48. The method of claim 47, wherein the workpiece comprises a surface layer comprising a material selected from the group consisting of monocrystalline silicon, polycrystalline silicon, amorphous silicon, tungsten silicide, titanium silicide, organic polymer, tungsten, copper, titanium, metal oxide, metal nitride, and combinations thereof.

49. The method of claim 47, wherein the polishing system is a chemical-mechanical polishing system further comprising a polishing composition.

50. The method of claim 47, wherein the method further comprises detecting *in situ* a polishing endpoint.